INABA -- 10/042,264
Client/Matter: 044020-0284163

REMARKS

Reconsideration and allowance of the present application based on the foregoing amendment and following remarks are respectfully requested.

By this Amendment, claims 1 and 47 are amended. After entry of this Amendment, claims 1-11, and 47-48 will remain pending in the application.

Claims 1, 4, 5, 7, 11 and 47 were rejected under 35 U.S.C. §102(b) over Funaki (U.S. Patent 5,463,237). The rejection is respectfully traversed.

It is respectfully noted that claim 11 depends from claim 3. As claim 3 was not rejected, it is respectfully submitted that the rejection of claim 11 is improper and fails to present a *prima facie* case of anticipation.

Claim 47 recites that the first impurity doped layer is equal to or less in junction depth than the extension region of each of the source/drain diffusion layers. The Office Action on page 3, lines 16-18, states that Funaki discloses a first impurity doped layer I that is equal to or less in junction depth than the extension region 27a-b of each of the source/drain diffusion layers. It is respectfully submitted, however, that Funaki does not disclose or suggest this feature of claim 1.

As clearly shown in Figure 33, the depth of the region I is not equal to or less than the depth of the lightly doped drain (LDD) regions 27a and 27b. As additionally disclosed in column 21, lines 7-9, the depth-direction width W1 of the region I is set smaller than the sum of the depletion layer widths Wg and Wj1. There is no disclosure or suggestion, however, that the junction depth of the region I is equal to or less than the junction depth of the LDD regions 27a and 27b.

Claim 1 recites a semiconductor device wherein the first impurity doped layer is equal to or less in junction depth than the extension region of each of the source/drain diffusion layers.

The Office Action on page 5, lines 2-4, alleges that Funaki disclose that the region I is equal to or less in junction depth than the extension regions 27a and 27b of each of the source/drain diffusion layers. The Office Action cites Figure 33 and column 20, lines 53-67 and column 21, lines 41-42, of Funaki.

As discussed above, the region I of Funaki is clearly not equal to or less in junction depth than the LDD regions 27a and 27b. Accordingly, Funaki cannot anticipate or render obvious claim 1.

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Claims 4, 5, 7 and 11 recite additional features of the invention and allowable for the same reasons discussed above with respect to claim 1 and for the additional features recited therein.

Reconsideration and withdrawal of the rejection of claims 1, 4, 5, 7, 11 and 47 over Funaki are respectfully requested.

Claims 1-3, 5 and 11 were rejected under 35 U.S.C. §103(a) over Miyamoto et al. (U.S. Patent 5,675,172). The rejection is respectfully traversed.

Claim 1 recites that the source and drain diffusion layers each have a low resistivity region and an extension region formed to extend from the low resistivity region toward the channel region. Claim 1 also recites that the extension region is lower in impurity concentration and shallower in depth than the low resistivity region.

The Office Action on page 6, paragraph 3A, equates the lightly doped n^- -type-offset layer 13 with the extension region of claim 1. It is respectfully submitted that the offset layer 13 of Miyamoto et al. does not correspond to the extension region of claim 1.

As clearly shown in Figure 10, the offset layer 13 has a depth equal, not shallower, than the drain region 4b.

It is also respectfully submitted that the source region 4a of Miyamoto et al. does not have an extension region. As discussed above, the extension region of claim 1 is shallower in depth than the low resistivity region. Accordingly, the parasitic resistance may be small. However, as discussed above, the offset layer 13 is equal in depth to the drain region 4b. According to this arrangement, the parasitic resistance in the drain region 4b may be large.

Claim 1 also recites that the first impurity doped layer is equal to or less in junction depth than the extension region of each of the source/drain diffusion layers.

The Office Action on page 7, lines 7-9, alleges that the doped layer 5 is equal to or less in junction depth than the extension regions of each of the source region 4a and the drain region 4b.

As discussed above, it is respectfully submitted that Miyamoto et al. do not disclose or suggest an extension region of either the source region 4a or the drain region 4b. In addition, as also discussed above, as shown in Figure 10, the doped layer 5 does not have a junction depth that is equal to or less than the depth of the offset layer 13, which the Office Action equates with the extension region. Accordingly, Miyamoto et al. do not disclose all of the features of the claim 1 and do not present a *prima facie* case of obviousness.

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Claims 2, 3, 5 and 11 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 1 and for the additional features recited therein.

Reconsideration and withdrawal of the rejection of claims 1-3, 5 and 11 over Miyamoto et al. are respectfully requested.

Claims 9 and 10 were rejected under 35 U.S.C. §103(a) over Miyamoto et al. in view of Cheek et al. (U.S. Patent 6,162,694). The rejection is respectfully traversed.

Claims 9 and 10 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 1 and for the additional features recited therein. In addition, it is respectfully submitted that Cheek et al. fail to cure the deficiencies of Miyamoto et al. with respect to claim 1 and that even assuming it would have been obvious to combine the references, such a combination would not have resulted in the invention of claim 1.

Reconsideration and withdrawal of the rejection of claims 9 and 10 over Miyamoto et al. in view of Cheek et al. are respectfully requested.

Applicant appreciates the indication of allowability of claims 6, 8 and 48.

Applicant has addressed all the Examiner's rejections and objections and respectfully submits that the application is in condition for allowance. A notice to the effect is earnestly solicited.

Respectfully submitted,
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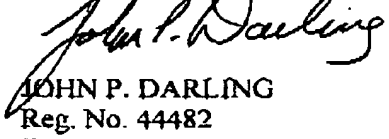

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